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4/29/94

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF NATURAL RESOURCES

Stevens T. Mason Building, P.O. Box 30028, Lansing, MI 48909

ROLAND HARMES, Director

April 29, 1994

Ms. Leah Evison (HSRW-6J)
Remedial Project Manager
U.S. EPA - Region V
77 West Jackson Blvd.
Chicago, IL 60604

Dear Ms Evison:

Subject: Albion-Sheridan Township Landfill Superfund Site, Calhoun County, Michigan.

The Michigan Department of Natural Resources (MDNR) has reviewed the Presumptive Remedy Risk Assessment. The review comments are attached.

I have very much enjoyed working with you on this project and I wish you the best of luck for its completion.

If you have any questions, please feel free to contact Mr. Jim Myers, Project Manager, Superfund Section, 517-373-2745.

Sincerely,

Gene L. Hall/mp

Gene L. Hall
Superfund Section
Environmental Response Division
517-373-6808

cc: Ms. Claudia Kerbawy, MDNR
Mr. Jim Myers, MDNR
Albion-Sheridan file (U1)

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

April 29, 1994

TO: Gene Hall
Superfund Section
Environmental Response Division

FROM: Linda D. Larsen, Toxicologist
Special Services Section
Environmental Response Division

SUBJECT: Albion-Sheridan Township Landfill, Calhoun County, Michigan

I have reviewed the Presumptive Remedy Risk Assessment for the Albion-Sheridan Township Landfill, Calhoun County, Michigan. My comments are as follow.

Section 2.3.3
U.S. EPA Risk Assessment Guidance for Superfund recommends both filtered and unfiltered analysis of groundwater when the water is of potable quality. Since both private and municipal supply wells are located adjacent to the site, metals analysis of the groundwater samples should have included unfiltered samples. Additionally, MDNR geologists recommend unfiltered analysis of samples taken from fractured bedrock wells. Bedrock wells are not expected to exhibit the problems associated with suspended solids common to monitoring wells placed in unconsolidated sediments. Also, recent literature indicates that contaminants adsorbed to colloidal particulates may move readily in fractured bedrock aquifers. Estimates of dosages and the accompanying risks may, therefore, be underestimated if only filtered analysis is relied upon to characterize contaminant levels.

Section 3.3.5
Elimination of essential nutrients from the final list of chemicals of concern is appropriate only if they are shown to be present at levels that are not associated with adverse health effects. Since manganese exceeds the Type B health based drinking water criteria it should be carried through the risk assessment.

Elimination of compounds from the list of chemicals of concern based on frequency of detection is not encouraged if conducting a risk assessment on a large number of chemicals is feasible (e.g., because of adequate computer capability). In addition, elimination of compounds which are infrequently detected but which exceed MDNR Type B criteria, or any other applicable, relevant and appropriate requirement (ARAR), is not acceptable.

Section 5.1
While several EPA regional offices are using potential potencies relative to benzo(a)pyrene for carcinogenic PAH's, this approach is intended as an interim measure and the slope factors derived from the potential potencies will not be listed on the Integrated Risk Information System (IRIS) until more definitive information is available. Therefore, the current MDNR policy is to assume that all carcinogenic PAHs are equipotent to benzo(a)pyrene.

Section 5.3
The statement is made that no toxicological information is available for chloroethane, however, a Type B drinking water criteria is listed in Table 1. The existence of a Type B criteria indicates that MDNR toxicologists have evaluated the available toxicological information and found sufficient basis for the development of health based criteria. An oral reference dose (RfD) of 18 mg/kg/day and an oral slope factor (SF) of 3.8E-3 $(mg/kg/day)^{-1}$ have been identified for chloroethane. Chloroethane should be carried through the risk assessment using the MDNR toxicity values.

Section 6.1.1
The Administrative Rules for the Michigan Environmental Response Act 307 (MERA) specify the acceptable level of risk of excess cancer as 1×10^{-6}. This differs from the U.S. EPA's use of an acceptable risk range of 1×10^{-6} to 1×10^{-4}. Language should be added to this section and to the summary which states that the MDNR acceptable risk level differs from that of the U.S. EPA and that the estimated risk of excess cancer exceeds the MDNR established risk level in all pathways considered in the risk assessment.

The use of the equipotency approach for assessment of risks from the carcinogenic PAH's and the inclusion of chloroethane is expected to increase the estimated risk for those media and pathways which include these chemicals.

Ecological Risk Assessment
I would recommend that MDNR Surface Water Quality Division review the ecological risk assessment since it consists in large part of an evaluation of the impacts to the Kalamazoo River ecosystem.

Section 2.3.6
The statement that the observed fauna behaved normally and did not demonstrate any inhibited or weakened behavior is trivial. Assessment of deleterious effects on wildlife cannot be made based on the observations of site visitors. The effects of environmental contamination on wildlife ecosystems are often extremely subtle and remain undetected in the absence of intense study.

cc: Chris Flaga
Jeff Crum

Linda D. Larsen